#1 Pending US Case

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: GREGORY A. HUNT
JENKINS, WILSON, TAYLOR & HUNT, P.A.
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PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

	Date of mailing *(day/month/year)* 12 OCT 2007
Applicant's or agent's file reference 1497127PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US07/00942	International filing date *(day/month/year)* 12 January 2007
Applicant SANTERA SYSTEMS, INC	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

   When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 740 14 35

   For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90*bis*.1 and 90*bis*.3, respectively, before the completion of the technical preparations for international publication.

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

   In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

   See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver Telephone No. 571-272-7774

Form PCT/ISA/220 (January 2004) *(See notes on accompanying sheet)*

VJLU 10-25-07

DOCKET DATES: 12/12/07-Art. 19 7/12, 8/12/08, 30/31
ASSIGNED ATTY: GAH
FILE NO. 1497/22 PCT
DOCKETED BY: CMB DATE: 10/16/07
#IDS due is 1/12/08 for 1497/27/2

PATENT COOPERATION TREATY

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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 1497127PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US07/00942	International filing date *(day/month/year)* 12 January 2007	(Earliest) Priority Date *(day/month/year)* 17 January 2006
Applicant SANTERA SYSTEMS, INC		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

   a. With regard to the **language**, the international search was carried out on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

   b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

   c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

   a. the figure of the **drawings** to be published with the abstract is Figure No. 1

   ☒ as suggested by the applicant.

   ☐ as selected by this Authority, because the applicant failed to suggest a figure.

   ☐ as selected by this Authority, because this figure better characterizes the invention.

   b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US07/00942

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04L 12/28(2007.01)
USPC - 370/391
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - H04L 12/28(2007.01)
USPC - 370/391

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Micropatent (See search history)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2005/0232232 A1 (FARBER et al) 20 October 2005 (10.20.2005) entire document	1-8,11,29 --- 9,10,12-28
Y	WO 2003/043299 A1 (WAH et al.) 22 May 2003 (22.05.2003) entire document	9-10
Y	WO 1999/040569 A2 (KAPANEN et al.) 12 August 1999 (12.08.1999) entire document	12-15,26-28
Y	WO 2005/050960 A1 (MYRE et al.) 02 June 2005 (02.06.2005) entire document	16-28

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
16 August 2007	12 OCT 2007
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (April 2007)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: GREGORY A. HUNT
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DURHAM, NORTH CAROLINA 27707

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	12 OCT 2007
Applicant's or agent's file reference 1497127PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US07/00942	12 January 2007	17 January 2006

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04L 12/28(2007.01)
USPC - 370/391

Applicant SANTERA SYSTEMS, INC

1. This opinion contains indications relating to the following items:

- [X] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [ ] Box No. IV Lack of unity of invention
- [X] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	16 August 2007	Blaine Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (April 2007)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US07/00942

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:

   a. type of material

      ☐ a sequence listing

      ☐ table(s) related to the sequence listing

   b. format of material

      ☐ on paper

      ☐ in electronic form

   c. time of filing/furnishing

      ☐ contained in the international application as filed

      ☐ filed together with the international application in electronic form

      ☐ furnished subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US07/00942

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	9,10 and 12-28	YES
	Claims	1-8,11 and 29	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	9,10 and 12-28	NO
Industrial applicability (IA)	Claims	1-29	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-8,11 and 29 lack novelty under PCT Article 33(2) as being anticipated by Farber et al. (US 2005/0232232 A1).

Referring to claims 1 and 29, Farber et al. disclose determining whether codec configurations used by different legs of a UMA-UMTS connection are compatible (claim 15); in response to determining that the codec configurations are compatible, determining whether rate control is required to establish a transcoding free connection (paragraph 95-96 and claim 15); in response to determining that rate control is required, issuing a rate control request to at least one of the UMTS and UMA legs (paragraphs 95-96); (d) determining whether the rate control request is successful (paragraph 26 and claim 15); and in response to determining that the rate control request is successful, establishing a transcoding free connection between the UMTS and the UMA leg in the media gateway (paragraph 26 and claim 15).

Referring to claim 2, depending from claim 1, Farber et al. disclose wherein issuing at least rate control request includes issuing a rate control request to the UMTS leg requesting that the UMTS leg start sending voice packets encoded at a rate corresponding to a decoding rate of theUMA leg (paragraph 21 and paragraphs 95-96).

Referring to claim 3, depending from claim 2 Farber et al. disclose determining whether the rate control request is successful includes monitoring voice packets received from the UMTS leg to determine whether the encoding rate used by the UMTS leg changes within a timeout
period (inherent to determining whether rate control request is successful paragraph 26 and claim 15).

Referring to claim 4, depending from claim 2, Farber et al. disclose determining whether the rate control request is successful includes determining whether an acknowledgment is received from the UMTS leg (paragraphs 95-96).

Referring to claim 5 depending from claim 1, Farber et al. disclose wherein issuing a rate control request on at least one of the UMTS and UMA legs includes sending a codec mode request (CMR) over the UMA leg (paragraph 91).

Referring to claim 6 depending from claim 5, Farber et al. disclose wherein determining whether the rate control request is successful includes monitoring an encoding rate of packets received from the UMA leg and determining whether the requested rate is achieved within a timeout period
(paragraphs 95-96).

Referring to claim 7, depending from claim 6, Farber et al. disclose in response to determining that the requested rate is achieved, sending an acknowledgement to the UMTS leg (paragraphs 95-96).

Referring to claim 8, depending from claim 6, Farber et al. disclose in response to determining that the requested rate is not achieved, sending a negative acknowledgement to the UMTS leg (paragraphs 64 and 91).

Referring to claim 11, depending from claim 2, Farber et al. disclose maintaining the transcoding free connection between the UMA leg and the UMTS leg (claim 15).

Claims 9 and 10 lack an inventive step under PCT Article 33(3) as being obvious over Farber et al. (US 2005/0232232 A1) in view of Wah et al. (WO 2003/043299 A1).

Referring to claim 9, depending from claim 1, Farber et al. disclose a transcoding free connection (claim 15). However, Farber et al. is silent wherein establishing a transcoding free connection in the media gateway includes connecting the UMTS leg to the UMA leg over an Ethernet switching fabric within the media gateway. However, Wah et al. teach wherein establishing a transcoding free connection in the media gateway includes connecting the UMTS leg to the UMA leg over an Ethernet switching fabric within the media gateway (page 3, line 3). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein establishing a transcoding free connection in the media gateway includes connecting the UMTS leg to the UMA leg over an Ethernet switching fabric within the media gateway into the invention of Farber et al. as taught in Wah et al. to route data (page 2, lines 30-31).

(Continued in Supplemental Box)

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Box No. V
2. Citations and explanations:

Referring to claim 10, depending from claim 1, Farber et al. disclose a transcoding free connection (claim 15). However, Farber et al. is silent wherein establishing a transcoding free connection in the media gateway includes connecting the UMTS leg to the UMA leg over an asynchronous transfer mode switching fabric within the media gateway. However, Wah et al. teach wherein establishing a transcoding free connection in the media gateway includes connecting the UMTS leg to the UMA leg over an asynchronous transfer mode switching fabric within the media gateway (page 2, lines 30-34). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein establishing a transcoding free connection in the media gateway includes connecting the UMTS leg to the UMA leg over an asynchronous transfer mode switching fabric within the media gateway into the invention of Farber et al. as taught in Wah et al. to route data (page 2, lines 30-34).

Claims 12-15 lack an inventive step under PCT Article 33(3) as being obvious over Farber et al. (US 2005/0232232 A1) in view of Kapanen et al. (WO 1999/040569 A2).

Referring to claim 12, depending from claim 11, Farber et al. disclose a transcoding free connection (claim 15). However Farber et al. is silent on maintaining the transcoding free connection includes performing redundancy reconciliation for redundant voice frames received from the UMA leg. Kapanen et al. teach maintaining the transcoding free connection includes performing redundancy reconciliation for redundant voice frames received from the UMA leg (page 4, lines 11-18). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate maintaining the transcoding free connection includes performing redundancy reconciliation for redundant voice frames received from the UMA leg into the invention of Farber et al. as taught in Kapanen et al. to correct errors (Kapanen et al. page 4, line 14).

Referring to claim 13, depending from claim 12, Farber et al. disclose a transcoding free connection (claim 15). However Farber et al. is silent on performing redundancy reconciliation for voice frames received over the UMA leg includes receiving redundant frames over the UMA leg and sending current frames to the UMTS leg. Kapanen et al. teach performing redundancy reconciliation for voice frames received over the UMA leg includes receiving redundant frames over the UMA leg and sending current frames to the UMTS leg (page 4, lines 16-18). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate performing redundancy reconciliation for voice frames received over the UMA leg includes receiving redundant frames over the UMA leg and sending current frames to the UMTS leg into the invention of Farber et al. as taught in Kapanen et al. to correct errors (Kapanen et al. page 4, line 14).

Referring to claim 14, depending from claim 12, Farber et al. disclose a transcoding free connection (claim 15). However Farber et al. is silent on maintaining the transcoding free connection includes performing redundancy reconciliation for frames received over the UMTS leg. However Kapanen et al. teach maintaining the transcoding free connection includes performing redundancy reconciliation for frames received over the UMTS leg (Kapanen et al. page 4, lines 11-18). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate maintaining the transcoding free connection includes performing redundancy reconciliation for frames received over the UMTS leg into the invention of Farber et al. as taught in Kapanen et al. to correct errors (Kapanen et al. page 4, line 14).

Referring to claim 15, depending form claim 14, Farber et al. disclose a transcoding free connection (claim 15). However Farber et al. is silent on wherein performing redundancy reconciliation for frames received over the UMTS leg includes receiving frames without redundancy over the UMTS leg, building redundant frames, and transmitting the redundant frames over the UMA leg. However, Kapanen et al. disclose wherein performing redundancy reconciliation for frames received over the UMTS leg includes receiving frames without redundancy over the UMTS leg, building redundant frames, and transmitting the redundant frames over the UMA leg (Kapanen et al. page 4, lines 11-18). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate disclose wherein performing redundancy reconciliation for frames received over the UMTS leg includes receiving frames without redundancy over the UMTS leg, building redundant frames, and transmitting the redundant frames over the UMA leg into the invention of Farber et al. as taught in Kapanen et al. to correct errors (Kapanen et al. page 4, line 14).

Claims 16-25 lack an inventive step under PCT Article 33(3) as being obvious over Myre et al. (WO 2005/050960 A1) in view of Farber et al. (US 2005/0232232 A1).

Referring to claim 16, Myre et al. disclose at least one broadband interface for sending media packets to and from a UMA leg and a UMTS leg of a connection (paragraph 45); a packet switching fabric for forwarding media packets between the at least one broadband interface and at least one internal processing resource of the media gateway (claim 24); at least one voice server for performing voice processing functions for media packets received from the UMA leg and the UMTS leg (paragraph 8); Myre et al. is silent on a UMA-UMTS transcoder free operation controller for establishing a transcoding free connection within the media gateway between the UMA and the UMTS legs via the at least one broadband interface, the packet switching fabric, and the at least one voice server. However, Farber et al. teach a UMA-UMTS transcoder free operation controller for establishing a transcoding free connection within the media gateway between the UMA and the UMTS legs via the at least one broadband interface, the packet switching fabric, and the at least one voice server (Figure 1 and claim 15). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a UMA-UMTS transcoder free operation controller for establishing a transcoding free connection within the media gateway between the UMA and the UMTS legs via the at least one broadband interface, the packet switching fabric, and the at least one voice server into the invention of Myre et al. as taught in Farber et al. to improve speech quality (Farber et al. paragraph 4).

(Continued on Supplemental Page)

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Supplemental page.

Referring to claim 17, depending from claim 16, Myre et al. disclose a voice server (paragraph 8), but fails to explicitly teach wherein the at least voice server is adapted to issue a rate control request to at least one of the UMA leg and the UMTS leg to establish the transcoding free connection. However, Farber et al. discloses wherein the at least voice server is adapted to issue a rate control request to at least one of the UMA leg and the UMTS leg to establish the transcoding free connection (paragraphs 95 and 96). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein the at least voice server is adapted to issue a rate control request to at least one of the UMA leg and the UMTS leg to establish the transcoding free connection into the invention of Myre et al. as taught in Farber et al. to improve speech quality (Farber et al. paragraph 4).

Referring to claim 18, depending from claim 17, Myre et al. disclose a voice server (paragraph 8), but fails to explicitly teach wherein the at least one voice server is adapted to issue a UMTS rate control request to the UMTS leg. However, Farber et al. discloses wherein the at least one voice server is adapted to issue a UMTS rate control request to the UMTS leg (paragraphs 95-96). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein the at least one voice server is adapted to issue a UMTS rate control request to the UMTS leg into the invention of Myre et al. as taught in Farber et al. to improve speech quality (Farber et al. paragraph 4).

Referring to claim 19, depending from claim 18, Myre et al. discloses a voice server (paragraph 8), but fails to explicitly teach wherein the at least one voice server is adapted to monitor the encoding rate being used by the UMTS leg. However, Farber et al. discloses wherein the at least one voice server is adapted to monitor the encoding rate being used by the UMTS leg (monitoring is inherent paragraphs 95-96). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein the at least one voice server is adapted to monitor the encoding rate being used by the UMTS leg into the invention of Myre et al. as taught in Farber et al. to improve speech quality (Farber et al. paragraph 4).

Referring to claim 20, depending from claim 18, Myre et al. discloses a voice server (paragraph 8), but fails to explicitly teach wherein the at least one voice server is adapted to monitor the UMTS leg for an acknowledgement to the rate control request. However, Farber et al. disclose wherein the at least one voice server is adapted to monitor the UMTS leg for an acknowledgement to the rate control request (Farber et al. paragraphs 95-96). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein the at least one voice server is adapted to monitor the UMTS leg for an acknowledgement to the rate control request into the invention of Myre et al. as taught in Farber et al. to improve speech quality (Farber et al. paragraph 4).

Referring to claim 21, depending from claim 18, Myre et al. discloses a voice server (paragraph 8), but fails to explicitly teach wherein the at least one voice server is adapted to issue a codec mode request (CMR) to the UMA leg. However, Farber et al. disclose wherein the at least one voice server is adapted to issue a codec mode request (CMR) to the UMA leg (paragraph 91). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein the at least one voice server is adapted to issue a codec mode request (CMR) to the UMA leg into the invention of Myre et al. as taught in Farber et al. to improve speech quality (Farber et al. paragraph 4).

Referring to claim 22, depending from claim 21, Myre et al. discloses a voice server (paragraph 8), but fails to explicitly teach wherein the at least one voice server is adapted to monitor the encoding rate being used by the UMA leg. However, Farber et al. disclose wherein the at least one voice server is adapted to monitor the encoding rate being used by the UMA leg (paragraphs 95-95). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein the at least one voice server is adapted to monitor the encoding rate being used by the UMA leg into the invention of Myre et al. as taught in Farber et al. to improve speech quality (Farber et al. paragraph 4).

Referring to claim 23, depending from claim 22, Myre et al. discloses a voice server (paragraph 8), but fails to explicitly teach wherein the at least one voice server is adapted to send an acknowledgement to the UMTS leg in response to determining that the codec mode request on the UMA leg is successful. However, Farber et al. disclose wherein the at least one voice server is adapted to send an acknowledgement to the UMTS leg in response to determining that the codec mode request on the UMA leg is successful (paragraphs 95-96). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein the at least one voice server is adapted to send an acknowledgement to the UMTS leg in response to determining that the codec mode request on the UMA leg is successful into the invention of Myre et al. as taught in Farber et al. to improve speech quality (Farber et al. paragraph 4).

Referring to claim 24, depending from claim 22, Myre et al. discloses a voice server (paragraph 8), but fails to explicitly teach wherein the at least one voice server is adapted to send a negative acknowledgement to the UMTS leg in response to failing to detect a change in the encoding rate on the UMA leg. However, Farber et al. disclose wherein the at least one voice server is adapted to send a negative acknowledgement to the UMTS leg in response to failing to detect a change in the encoding rate on the UMA leg (paragraphs 64 and 91). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein the at least one voice server is adapted to send a negative acknowledgement to the UMTS leg in response to failing to detect a change in the encoding rate on the UMA leg into the invention of Myre et al. as taught in Farber et al. to improve speech quality (Farber et al. paragraph 4).

Referring to claim 25, depending from claim 16, Myre et al. discloses a voice server (paragraph 8), but fails to explicitly teach wherein the at least one voice server is adapted to maintain the transcoding free connection. However Farber et al. disclose the at least one voice server is adapted to maintain the transcoding free connection (Farber et al. claim 15). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the at least one voice server is adapted to maintain the transcoding free connection into the invention of Myre et al. as taught in Farber et al. to improve speech quality (Farber et al. paragraph 4).

(Continued on Supplemental page)

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Supplemental page:

Claims 26-28 lack an inventive step under PCT Article 33(3) as being obvious over Myre et al. (WO 2005/050960 A1) in view of Farber et al. (US 2005/0232232 A1) and further in view of Kapanen et al. (WO 1999/040569 A2).

Referring to claim 26, depending from claim 25, Myre et al. is silent on maintaining the transcoding free connection, the at least one voice server is adapted to perform redundancy reconciliation between the UMA and UMTS legs. However Farber et al. disclose bypassing transcoder operations (abstract lines 1-2). Therefore it would have been obvious to one of ordinary skill in the artat the time the invention to incorporate bypassing transcoder operations (abstract lines 1-2) into the invention of Myre et al. as taught in Farber et al. to reduce the use of transcoders. However, Myre et al. in view of Farber et al. is silent on maintaining the transcoding free connection at least one voice server is adapted to perform redundancy reconciliation between the UMA and UMTS legs. Kapanen et al. disclose at least one voice server is adapted to perform redundancy reconciliation between the UMA and UMTS legs (page 4, lines 11-18).Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate maintaining the transcoding free connection at least one voice server is adapted to perform redundancy reconciliation between the UMA and UMTS legs into the invention of Myre et al. in view Farber et al. as taught in Kapanen et al. to correct errors (Kapanen et al. page 4, line 14).

Referring to claim 27, depending from claim 26, Myre et al., is silent on maintaining the transcoding free connection, the at least one voice server is adapted to perform redundancy reconciliation between the UMA and UMTS legs. However Farber et al. disclose bypassing transcoder operations (abstract lines 1-2). Therefore it would have been obvious to one of ordinary skill in the artat the time the invention to incorporate bypassing transcoder operations (abstract lines 1-2) into the invention of Myre et al. as taught in Farber et al. to reduce the use of transcoders. However, Myre et al. in view of Farber et al. is silent on in performing the redundancy reconciliation, the at least one voice server is adapted to build redundant voice frames to be transmitted over the UMA leg based on packets received over the UMTS leg. However, Kapanen et al. disclose in performing the redundancy reconciliation, the at least one voice server is adapted to build redundant voice frames to be transmitted over the UMA leg based on packets received over the UMTS leg (page 4, lines 11-18). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate performing the redundancy reconciliation, the at least one voice server is adapted to build redundant voice frames to be transmitted over the UMA leg based on packets received over the UMTS leg into the invention of Myre et al. in view of Farber et al. as taught in Kapanen et al. to correct errors (Kapanen et al. page 4, line 14).

Referring to claim 28, Myre et al. depending from claim 25, is silent on maintaining the transcoding free connection, the at least one voice server is adapted to perform redundancy reconciliation between the UMA and UMTS legs. Farber et al. disclose bypassing transcoder operations (abstract lines 1-2). Therefore it would have been obvious to one of ordinary skill in the artat the time the invention to incorporate bypassing transcoder operations (abstract lines 1-2) into the invention of Myre et al. as taught in Farber et al. to reduce the use of transcoders. However, Myre et al. in view of Farber et al. is silent on in performing the redundancy reconciliation, the at least one voice server is adapted to receive redundant voice frames from the UMA leg and transmit current voice frames over the UMTS leg. However, Kapanen et al. disclose in performing the redundancy reconciliation, the at least one voice server is adapted to receive redundant voice frames from the UMA leg and transmit current voice frames over the UMTS leg (Kapanen et al. page 4, lines 1-18) . Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate in performing the redundancy reconciliation, the at least one voice server is adapted to receive redundant voice frames from the UMA leg and transmit current voice frames over the UMTS leg into the invention of Myre et al. in view of Farber et al. as taught in Kapanen et al. to correct errors (Kapanen et al. page 4, line 14).

Claims 1-29 meet the criteria set out in PCT Article 33(2)-(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: GREGORY A. HUNT
JENKINS, WILSON, TAYLOR & HUNT, P.A.
SUITE 1200, UNIVERSITY TOWER
3100 TOWER BOULEVARD
DURHAM, NORTH CAROLINA 27707

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

	Date of mailing *(day/month/year)* 12 OCT 2007
Applicant's or agent's file reference 1497127PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US07/00942	International filing date *(day/month/year)* 12 January 2007
Applicant SANTERA SYSTEMS, INC	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see 46):

   When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 740 14 35

   For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90*bis*.1 and 90*bis*.3, respectively, before the completion of the technical preparations for international publication.

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

   In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

   See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver Telephone No. 571-272-7774